

XVI.—*New Species of Brackish-water Mollusks.*

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Subfamily BYTHINIINÆ, Troschel [emend.].

Gebiss der Schnecken, I, 1857, as Group "Bythiniæ"; emend. Stimpson, 1865, and Clessin, Malak. Blät. 1880, as subfamily of the Rissoidæ.

STENOTHYRA WOODMASONIANA, n. sp.

T. parva, imperforata, ovato-acuta, solida, crassa, pallide viridula, polita, nitida, (sub lente) obsolete submalleata; spira aculeiformis, sub-concava, producta, apice peracutissimo; anfr. 6, haud convexi, ultimus pertumidus, medio subangulatus, basi applanatus, antice ad aperturam abrupte et valide deflectus; apertura percontracta, perfecte rotundata, marginibus continuis, valide incrassatis.

Long. $3\frac{1}{2}$, diam. vix 2 mill.

HAB. Port Canning.

This interesting form is easily recognized by the very acute and concavely-excavated spire, the subangulate last whorl, flattened round the umbilical region; it is not spirally pitted, as in most species of the genus, but appears obsoletely malleated or indented under a powerful lens.

This is one of Mr. Wood-Mason's interesting discoveries from the still imperfectly explored brackish-water Sunderbunds (embouchure of the rivers Hooghly, &c.).

Type Indian Museum, Calcutta; also in coll. Dohrn, Beddome, Theobald, Blanford, and Hungerford.

STENOTHYRA HUNGERFORDIANA, n. sp.

T. parva, imperforata, ovato-elongata, solidiuscula, viridula, vix nitida, (sub lente) lineis impressis ac dense puncticulatis confertim cingulata; spira paululum elongata, ovato-convexa, apice obtuso, sutura profunda ac obsoleta marginata; anfr. 4, convexi, ultimus compresse ovuliformis, antice sub-applanatus, valde descendens; apertura perpusilla, suboblique rotundato-ovata, superne leviter angulata, sulco profundiori ab anfractu ventrali separata, peristomate obtuso.

Long. $2\frac{1}{2}$, diam. $1\frac{1}{2}$ mill.

HAB. Andaman Islands.

This is one of the most distinct and interesting species of the genus as yet discovered: the few imperforate whorls, with markedly obtuse apex; the distinct, though minute, close punctulation; the unusually convex whorls, with the remarkable long, compressed, slightly flattened, and egg-shaped last whorl are all good characters. The suture is very distinct and, on the last whorl, distinctly marginate below. The operculum is normal.

Type Indian Museum, Calcutta; also in coll. Dohrn, Warneford, Theobald, Blanford, and Hungerford.

STENOETHYRA BLANFORDIANA, n. sp.

T. minima, *superficie rimata, subventricoso-ovata, vix solidiuscula, nitida, laevis, pallide cornea, subpellucida; spira subacuta, apice minuto, subobtusio; anfr. 4½, convexi, ultimus magnus, subsolutus, tumido-ventricosus, subbiangulatus, antice subapplanatus; apertura subovalis, paululum postice retrorsa, peristomate continuo, superne angulato. Operculum ovale, superne leviter acuminatum, vix crassiusculum, subtranslucidum, spirale, apice subcentrali, interne testaceo-costatum.*

Long. $3\frac{1}{10}$, diam. $2\frac{1}{10}$ mill.

HAB. Chilka-lake (type); also Port Canning and Madras.

I am indebted to Mr. Wood-Mason for a careful examination of the operculum of this small form: "it is oval, subtransparent, spiral, of few whorls, with the apex almost central, on the inner side three ridges, one semicircular and two short ones with a slight S-curve, for the attachment of the animal."

The species is somewhat variable, especially as regards size and the greater or less distinctness of the angulation of the last whorl. Specimens from Port Canning agree better with the above-described typical form than do those from Madras.

I have named this species in honour of its first discoverer, Mr. H. F. Blanford. It appears to be abundant at Port Canning, Chilka Lake, and Town of Madras; living with it there occurs another form, nearer *St. minima*, Sow. (but I think distinct), with more produced spire than *St. blanfordiana*, less tumid last whorl, without any trace of biangulation, with the aperture rounder, and not angled above; there is yet another still smaller decollate form from Port Canning, probably also a distinct species.

Type Indian Museum, Calcutta; also in coll. Hungerford, Theobald, Beddome, Blanford, and Dohrn.

Subfamily HYDROBIINÆ, *Troschel* [emend.].

Gebiss der Schnecken, I, 1857, as Group "Hydrobiac"; emend. Stimpson, 1865.

HYDROBIA (BELGRANDIA) MILIACEA, n. sp.

T. minuta, vix rimata, conico-elongatula, solida, parum nitida, albido-viridula, lævigata; spira paululum producta, apice minuto, acutiusculo; anfr. 5, convexiusculi, ultimis duobus rapide accrescentibus, ultimo basi subplanulato, ad aperturam gibbositate crassa circumscripto; apertura ovato-rotundata, intus incrassata, peristoma continuum, valide incrassatum, margine externo arcuato, basi sinuato, margine columellari subangulatim contorto, subreflexo. Operculum sat profunde immersum, tenue, pellucidum, vitreum.

Long. vix $2\frac{3}{4}$, diam. $1\frac{3}{4}$ mill.

HAB. Port Canning.

Var. *minor*; long. 2, diam. $1\frac{1}{4}$ mill.

HAB. Port Canning.

Found in great abundance in brackish-water ponds, associated with *Valvata* (?) *microscopica*, Nev., new species of *Bythinia*, *Martesia*, *Teredo* (?), *Pharella*, *Theora*, *Stenothyra blanfordiana*, &c. From the last-named, the remarkable callosity behind the outer lip, besides many other characters above recorded, at once distinguishes it.

This interesting shell is the first extra European species described of the genus (?) *Belgrandia*, Bourg.

Type Indian Museum, Calcutta; also in coll. Beddome, Theobald, Hungerford, Joly, Dohrn, and Blanford.

Subfamily ASSIMINEINÆ, [emend.].

Group Lithoglyphi, Tröschel, Gebiss der Schnecken, I, 1857 [pars].

Fam. Assiminiidae, H. and A. Adams, Genera Moll. 1858.

Fam. Assimineidae, Clessin, 1880.

Section of sub-fam. Pomatiopsinae, Stoliczka, Gast. I, 1868.

ASSIMINEA SINENSIS, n. sp.

T. imperforata, ovato-conica, solidula, nitida, subglabra, castanco-fusca, linea impressa infra suturam subobsolete notata; spira producta, conica, apice subacuto; anfr. $7\frac{1}{2}$, subplaniusculi, ultimus compressus, vix convexiusculus, carina nulla munitus; apertura parva, subverticalis, marginibus callo subobsolete junctis, margine externo tenui, margine columellari arcuato, incrassato, saturate castanco-fusco, inferne subangulato.

Long. 5, diam. 3 mill.

HAB. Hongkong.

I am indebted for this, as for many other novelties, to Surgeon-Major R. Hungerford.

Type Indian Museum, Calcutta; also in coll. Hungerford.

ASSIMINEA PEASEANA, H. Nevill, MSS.

T. peranguste perforata, ovato-conica, notabiliter tenuis, glabra, nitida, vivide straminea, ad suturam fascia livida (plus minusve subobsolete) marginata; spira convexo-conica, producta, apice acuto; anfr. 7, convexiusculi, ultimus rotundatus, inferne convexus, circa perforationem haud carinatus; peristoma perregulariter rotundatum, ad basin haud angulatum; margo columellaris late dilatatus, subduplex, castaneo vivide tinctus; apertura subrotundata, marginibus callo subobsolete castaneo junctis.

Long. $5\frac{3}{4}$, diam. $3\frac{1}{2}$ mil.

HAB. Lake Negombo, Ceylon.

Named in manuscript by my brother, in honour of the late Harper Pease of Honolulu; it is a very distinct species, easily distinguished from *Ass. subconica*, *Ass. marginata*, &c., by its thin texture, peculiar coloration, absence of any trace of sculpture, rounded margins of the aperture, &c. Specimens of rather larger size than that of which the measurements are above recorded occasionally occur.

Type Indian Museum, Calcutta; also in coll. H. Nevill and H. Dohrn.

ASSIMINEA BIFASCIATA, n. sp.

T. imperforata, ovato-conica, solida, vix glabriuscula, subnitida, sordide viridula, fasciis binis fuscis et subobsoletis cincta; spira moderate producta, convexo-conica, apice subacuto; anfr. $6\frac{1}{2}$, convexiusculi, ultimus tumide ventricosus, ad peripheriam subangulatus; apertura ampla, subverticalis, marginibus callo pervalido fusco-limbato junctis, margine columellari fere recto, valide incrassato, sordide fusco, inferne subrotundato.

Long. $5\frac{1}{2}$, diam. $3\frac{1}{2}$ mill.

HAB. Brackish-water lagoon, Port Natal.

A common species, quite distinct from the three forms described by Krauss.

Type Indian Museum, Calcutta.

ASSIMINEA DOHRNIANA, n. sp.

T. parva, solidiuscula, ovata, fusco-viridescens, anguste umbilicata, laevigata, sutura lineari, haud marginata; spira curta, apice perobtusum; anfr. 4, rotundato-convexi ac tumidi, ultimus inflatus, subtus convexus, basi prope regionem umbilicalem subexcavate depressus; apertura subverticalis, ovato-pyriformis, dimidiam totius longitudinis aequans, intus pallide

viridescens; *margo columellaris superne valide intortus, reflexus, inconspicue fulvo tinctus, inferne vix rotundatus.*

Long. 3, diam. $2\frac{1}{2}$ mill.

HAB. Hongkong.

The short spire, with obtuse apex, the depression of the last whorl round the narrow umbilicus, the bent columella, and the thick somewhat eroded texture, of a greenish colour unusual in the genus, are the best characteristics of this small species, for which I am indebted to my friend Surgeon-Major R. Hungerford; I have named it after my esteemed correspondent Dr. Henry Dohrn of Stettin.

Type Indian Museum, Calcutta; also in coll. Dohrn and Hungerford.

ASSIMINEA WOODMASONIANA, n. sp.

T. imperforata (vel ad regionem umbilicalem minutissime perforata), carina parva ac subobsoleta circumscripta, lanceolata, conica, solidiuscula, nitida, subglabra, dilicte castanea, prope suturam pallide rubido fasciata ac linea impressa marginata; spira conico-elongata, anfractum ultimum fere aequans, apice perminuto, acutissimo; anfr. $7\frac{1}{2}$, vix convexiusculi, regulariter crescentes, ultimus subcompressus, obscure subangulatus; apertura parva, subverticalis, ovata, marginibus callo tenui junctis, margine columellari pallide castaneo, paululum incrassato, subrecto, inferne subangulato.

Long. 4, diam. $2\frac{1}{2}$ mill.

HAB. Port Canning, near Calcutta.

I have named this pretty and very distinct species after my friend Mr. J. Wood-Mason, to whose very successful researches in the Sunderbunds the Museum is indebted for so many interesting mollusks, as I have already pointed out in my Catalogue, Fasc. E. p. 22, when describing the operculum of *Larina burmana*. The small, almost obsolete, keel round the very minute perforation (which is sometimes completely covered) is very characteristic.

Mr. Wood-Mason has favoured me with the following extract from his note-book on the animal of this species—"Eyes large, intensely black, situated on the upper side and near the extremity of the peduncle; animal transparent, above very slightly greyish, between the tentacles reddish, which are so transparent that the eye-spots can be seen very nearly as well from the under side."

Type Indian Museum, Calcutta; also in coll. Beddome, Hungerford, Blanford, Dohrn, Theobald, and Joly.

ASSIMINEA BEDDOMEANA, n. sp.

T. depresso-turbinata, quoad formam species generis Colloniæ quodammodo memorans, peculiariter obscure sed profunde umbilicata, de-

presso-conoidea, solida, crassiuscula, nitida, subglabra, ad basim (sub lente) striis incrementi subobsoletis munita, saturatissime fulvo-livida, infra suturam albo fasciata, fascia prope aperturam plus minusve evanescente; sutura vix distincta, linea obscure impressa et subobsoleta notata; spira obtuse depresso-conoidea, apice minutissimo; anfr. 5, ultimus subtus perglobose ventricosus, ad peripheriam obsolete subsubangulatus, infra subplanulatus, circa umbilicum callo lato pallide fusco et obscure albo-limbato munitus; apertura ampla, subrotundata, intus incrassata, marginibus callo albido prope aperturam valido ac distincto (interdum subobsoleto) junctis; columella pernotabiliter et valide incrassata, inferne abrupte retrorsa, triangulari-linguiformis, applanata ac excavate rugosa, superne in umbilicum abrupte desinens. Operculum tenue ac corneum; anfr. 3 (sub lente vix distinguendi) in umbonem subcentralem ac prominentem desinentes.

Alt. 3, diam. $3\frac{1}{5}$ mill.

HAB. Port Canning.

The most remarkable and abnormal species of the genus as yet described. The animal is that of a typical *Assiminea*, both the late Dr. Stoliczka and myself having examined numerous specimens. The Museum is indebted for its extensive series of this and the following species to Mr. Wood-Mason.

Type Indian Museum, Calcutta; also in coll. Dohrn, Hungerford, Blanford, Theobald, Joly, and Beddome.

ASSIMINEA THEOBALDIANA, n. sp.

T. parva, anguste umbilicata, ovato-conica, solidiuscula, vix nitida, corneo-fulvida, sub lente spiraliter minutissime confertimque sulcata, striis incrementi plus minusve obsolete decussata; spira conica, vix producta, apice acuto; anfr. $6\frac{1}{2}$, convexi, supremi sublaeves, cacteri infra suturam distincte angulati, superne sublaeves, inferne spiraliter confertimque sulcati, oblique subgranulati decussati, ultimus globose subrotundatus, in medio striis decussantibus plus minusve subobsoletis, prope umbilicum distinctioribus, notatus; apertura sat ampla, subverticalis, marginibus callo nitido junctis, margine columellari supra leviter contorto, infra rotundato.

Long. $4\frac{1}{3}$, diam. 3 mill.

HAB. Port Canning.

In old specimens, the last two or three whorls have a pitted appearance, as in many species of *Stenothyra*; in younger ones, the two antepenultimate whorls have a beautiful granulose appearance under the lens. The oblique and decussating striae are always obsolete on the last whorl,

except near the umbilicus and in the interstices of the spiral sulcations; the narrow smooth ledge below the suture, on the last two or three whorls, formed by an abrupt cessation of the sculpture, is very peculiar and characteristic. I need scarcely say that I have named this remarkable species after my friend Mr. William Theobald of the Geological Survey of India.

Type Indian Museum, Calcutta; also in coll. Theobald, Hungerford, Beddome, Blanford, Dohrn, and Joly.

ASSIMINEA MICROSCULPTA, n. sp.

T. parva, vix perforata, cylindrico-conica, solidiuscula, vix nitida, fulvo-cinerea, spiraliter distincte sulcata, striis longitudinalibus obliquis ac flexuosis decussata, apice acuto; anfr. 5½, gradato-cylindrici, supremi laeves, 2dus spiraliter sulcatus, 3tuus et 4tus insigne equaliterque decussati (quasi gemmulati), ultimus subbiangulatus, supra peripheriam angulatus, striis decussantibus paululum subobsoletis notatus, sculptura infra evanescente; apertura subverticalis, parva, marginibus callo indistincto junctis, margine columellari haud contorto, leviter rotundato.

Long. $2\frac{3}{4}$, diam. $1\frac{3}{4}$ mill.

HAB. Port Canning.

Type Indian Museum, Calcutta; also in coll. Dohrn, Joly, Hungerford, Theobald, Blanford, and Beddome.

It presents some resemblance to the preceding species in the sculpture, which in *Ass. microsculpta*, however, is much more strongly developed, the difference in young specimens being especially marked. The shape is quite different, the whorls being cylindrically-gradated, instead of convexly-swollen, &c.

ASSIMINEA HUNGERFORDIANA, n. sp.

T. imperforata, ovato-conica, solida, nitida, glabra, polita, omnino laete castanea, sutura subindistincta; spira brevis, apice vix acuto; anfr. 6, sublumide convexiusculi, ultimus magnus, regulariter ovuliformis, infra suturam linea impressa subobsoleta notatus; apertura verticalis, marginibus callo castaneo junctis, margine externo tenui, margine columellari incrassato, recto, paululum retrorso, ad basin subabrupte angulato.

Long. 4, diam. $2\frac{1}{2}$ mill.

HAB. Mouth of the Rangoon River.

I have much pleasure in naming this beautiful and very distinct species after its discoverer, Surgeon-Major R. Hungerford, who has lately been most successful in collecting and dredging Mollusca both at Hongkong and the Philippine Islands. The rich chocolate, or chesnut, colour of the

species is very characteristic; there is a slight tendency on the upper portions of the whorls to be of a darker and duller shade; the indistinct suture, short but produced spire, large and regularly egg-shaped last whorl, straight and slightly twisted columella, forming an angle at its base, are all well-marked characters. Under a very powerful lens, striæ of growth are discernible, which become more developed behind the outer lip.

Type Indian Museum, Calcutta; also in coll. Hungerford.

ASSIMINEA TEMPLEANA, n. sp.

T. imperforata, ovato-conica, persolida, crassa, nitida, laevis, fusco-cornea, sutura distincta, haud marginata; spira conica breviter producta, apice acuto; anfr. 5½, convexiusculi, rapide crescentes, ultimus magnus, tumide ventricosus, ad peripheriam subangulatus, basi subapplanatus; apertura sat magna, marginibus callo acuto valido et albo junctis, margine externo regulariter convexo-rotundato, columellari subrotundato, duplici ac valide reflexo, regionem umbilicalem tegente, supra distincte transversimque unisulcato.

Long. $3\frac{3}{4}$, diam. $2\frac{1}{2}$ mill.

HAB. Nicobar Islands.

I have named this interesting small species after Lieutenant R. C. Temple, who has presented the Museum with many valuable shells from the Andamans, Ferozepore, and other places. It is eminently characterized by the remarkable callously-reflected, duplex columella, transversely notched or sulcated above.